



# Understanding Change, Adapting to Change, Shaping the Future

Change Drivers, Trends & Core Tensions for  
European Learning Systems & Educational Policies

## Executive Summary



# LEONIE



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Learning in Europe: Observatory on National and International Evolution

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## Change Drivers, Trends & Core Tensions for European Learning Systems & Educational Policies

### Executive Summary

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Learning in **E**urope: **O**bservatory on **N**ational and **I**nternational **E**volution



# EXECUTIVE SUMMARY

Are European Education and Training systems leading the way towards the knowledge society or just trying to adapt to the short-term economic agenda? Are they expanding their role from an ancillary service to a leading force of economic and social development?

LEONIE - Learning In Europe, Observatory on National and International Evolution, co-funded by the Socrates programme, Action 6.1 'General activities of observation and analysis', intends to tackle these fundamental questions by monitoring change processes in European learning systems and to stimulate proactive and transformative approaches to change.

In order to achieve these objectives, LEONIE has conducted two parallel surveys, inspired by an innovative combination of quanti-qualitative approaches: a Weak Signal Survey addressed to European stakeholders and a Delphi Survey addressed to experts on European education and training.

The following table summarise the main features of those surveys.

**Table 1:** Main Features of the Delphi & Weak Signals Surveys

Type of Survey	Delphi Survey	Weak Signal Survey
<b>Main Features</b>		
<b>Target Groups</b>	E&T knowledgeable experts in Europe	E&T Stakeholders (students, parents, researchers, teachers...)
<b>Objective</b>	Forecast, consensus building on trends of change and policies	Acquiring divergent/creative signals/views
<b>Methodology</b>	Three-round consensus building process quanti-qualitative carried out on line	Anonymous quanti-qualitative online survey based on the weak-signals theory
<b>Results</b>	Set of trends and change likely to affect learning systems from inside and outside, set of policies related to these trends considered likely/appropriate	Set of strong, rather strong and weak or divergent signals: narrations of future learning

The Weak Signal Survey, addressed to E&T stakeholders, collected expectations or 'signals' of future developments. The emerging scenario, according to the Weak signal survey results, is that education and training will be increasingly based on online delivery. Face to face delivery mode will be used to complement e-Learning, to satisfy the needs of individual learners, their learning styles as well needs arising from instructional design. Learners will be able to choose from a variety of delivery modes/tools/resources/ways of learning.

The use of new technologies is influencing the process of teaching/learning by enabling new approaches, creating new models and innovative tools. Individual learners will take greater responsibility of their own development, self-training will become more common. A teacher's role as a facilitator/enabler will become more prominent. Knowledge sharing will be more interactive between learners and tutors, and between learners. Collaborative learning will become standard, both face-to-face and through video, in national and international contexts.

Education and training will be more flexible and tailored according to learners' needs. Problem-solving scenarios, group activities and simulations will replace lectures. There will be more networks between institutions making it possible for a student to compile his/her education by choosing different modules from different providers.

The student-centred approach and the overwhelming information flood both mean that learners need to become more critical.

New school subjects will be developed to enhance digital literacy and **personal organisation of knowledge**. Lots of fragmented facts are available, and therefore people should have the preparedness to understand the world as an entity and to draw conclusions.

Interactive training will make **education more fun**. Examples like 'flight simulation', 'patient simulation' and 'company simulation' allow to make mistakes without serious consequences (safe failure).

In the future, **training and learning** will increasingly become a **business activity**, following the business models describing them as knowledge-based services. A global market for learning supplies will be created to fulfil these needs. The value of traditional diplomas will decrease, as companies need 'doers' instead of diplomas. Paying clients will no longer accept low-quality education.

**Learning and work** will continue to integrate. New ways for performance support at knowledge intensive work are developed to enhance learning on-demand. The importance of informal learning will increase, because the traditional way of teaching cannot be effective enough to provide learners with practical skills and knowledge. Learning will become more and more just-in-time learning.

Innovations will be fostered by collaboration, ability to learn from each other and to relate theory with practice. Effective knowledge creation processes will emphasize systematic knowledge sharing and codification of tacit knowledge to the benefit of the organization. A culture of openness, trust, and commitment are the cornerstones of this knowledge sharing process.

The easy access to information has potential to improve the life standards everywhere in the world, but there exists also a risk that while **privileged learners will continue to gain easiest access** to learning, the **unprivileged ones will be losing the battle of education and employability** in fast-growing paces. A sudden leap towards self-directed learning styles will leave a mass of people without any possibilities of achieving skills. It may also be that in the future, the few control the world, and the majority has no power.

There is a tendency to shift education, an area historically under the control of the individual states/nations, towards the creation of a **global education sphere**. Science has always been international, while education has remained national. In the future, the content of education and training will be internationalised. As companies do business more internationally it also requires education to be oriented this way (curriculum design).

Governments' and industry's influence in the provision of education and training will continue to increase, while education professionals' role in the process is decreasing. This is likely to result in **greater variation in quality of education and training**.

Those signals that received rather high average relevance value in the assessment process, while the deviation of opinions on the relevance also remained high, fall in the category of **weak signals**. Several of them describe bold scenarios in which e.g. catastrophes or recessions will result in education and training becoming a low priority in societies. Similar developments could strengthen the role of corporative universities while public education systems would suffer from lack of resources. This could further enhance unwanted depersonalization of education and training. Virtual worlds and gaming promote a culture where individuals have multiple identities. The true impact of such development on working life, education and training remains yet to be seen and could bear unforeseeable risks. Increased fragmentation and specialization in science was also recognized as a threat to education and training systems.

The radicalism of certain results emerging from the weak signal survey have been balanced by the **Delphi Survey**, addressed to E&T knowledgeable experts in Europe, and based on a consensus building process.

In this survey respondents were required to rate, on a scale of one to seven, the influence of several trends of change, both endogenous and exogenous, in shaping the European education and training systems over the next 10 years.



The second part of the questionnaire dealt with policies intended to influence education and training over the next 10 years. Respondents were invited to read a list of policies intended to cope with the changing learning system in Europe and to spur its developments. In this respect, respondents were requested to indicate, for each of the policies proposed:

- a) To what extent they consider them likely to be implemented over the next 10 years by the EU and the member states?
- b) To what extent they consider them appropriate for the positive development of the European learning systems over the next 10 years?

The main results of the **Delphi Survey** are summarised below:

- The scenario emerging from the answers of the experts, although not definable in an **univocal** way, is one in which European education and training will become more and more plural in a society more and more plural, more attentive to individual needs, and therefore reflecting the diversification of learning and living patterns in Europe, more open to cross-cultural/national initiatives and, finally, more and more evolving in accordance with economic macro-trends such as the rise of the knowledge economy, the internationalisation of exchanges and flexibility of companies and individuals. This last development might also imply the massive entry of market paradigms into E&T, according to respondents.
- In many respects, the results of the second part of the questionnaire (i.e. the one referring to policies) **corroborate** the ones of the first part (referring to trends), an example of it being the high importance attributed to information technologies within and outside education and training, with relevant implications for the policies to be implemented by decision-makers (stimulate the use of ICT for learning, broadening access etc).
- The issue of contextualising trends on a specific time-scale or in a defined spatial context (a country, a region) or even in a certain segment of European learning systems (education, training, and, at a further level of granularity, higher education, corporate training etc) is fundamental. The experts seem to point out that one size fits all hypotheses are not appropriate for tackling a complex issue such as the future evolution of education and training in Europe. Different trends in different countries are taking place at different speeds and at different institutional levels: the considerable differentiation of European learning systems will continue to exist and produce differentiated scenarios in spite of the recognised validity of identified trends across counties and sub-sectors.
- Nevertheless, political initiatives aimed at spurring the developments of European E&T in the same directions are considered moderately likely and appropriate, as the outcomes of the second part of the questionnaire show. On the other hand, the experts are somehow cautious in attributing high levels of likelihood to policies, in an economic conjuncture in which the average level of public expenditure into education and training is decreasing in several countries.

The study results of the Delphi and Weak signal surveys were presented in **eight national seminars** to validate their outcomes in the light of national and sectional specificities and in an international final conference. Overall, the validation and enrichment of results through surveys and seminars/conferences has involved more than 2,000 education and training experts and stakeholders.

A large number of active and committed participants and speakers drew a variegated picture of the complex situation in education and training across Europe in consideration of two core questions raised by LEONIE: “Which trends identified by LEONIE on the European level exist in your country?” and “Are there other trends in your country?” As a result, most of the trends discovered by the surveys LEONIE carried out exist in the eight participating countries – according to the national validation seminars – too.

### Trends affecting European E&T

ICT: Access to infrastructures and the effective use converging media. This is in general the dominant trend in European E&T. In the course of the validation seminars, the gap between the provided hardware and the available e-Learning software was criticised: schools and other E&T institutions are equipped quite well with ICT in the meantime, but most of the products and programs obtained by these institutions are of very poor quality. It was stated that the development of e-Learning software is

still in its infancy and the deployment of valuable pedagogical tools is still to come. Only a sensible integration of e-Learning and traditional forms of learning could accomplish an enriched personal didactical setting in order to draw benefits from technology.

Quality of education: The push towards evaluation was considered controversial regarding the raise of quality in E&T – another strong trend affecting European E&T. Finnish experts mentioned e.g. that basic education is in crisis as they observed a loss of resources earmarked to it. The shift of resources from basic education to adult education was perceived as very problematic, resulting in expensive adult education, e.g. employment training. Romanian E&T experts on the other hand observed a potential decrease of the quality of higher education provision, assumedly deriving from a decreased quality of primary and secondary education provision. In contrast, Spanish E&T expressed their opinion that in the future not so much initial vocational training will be needed. In their view, a good secondary education and a good occupational training are sufficient for the majority of employments and jobs.

Lifelong Learning: The seminar attendees noticed a general resistance against the concept of Lifelong Learning across Europe. A holistic concept like LLL would require a rather dramatic change in the structure of educational systems. But this is not in sight even despite of ambitious reform projects, which are to be implemented all over European countries. On the one hand, the inertia of E&T institutions must be overcome by structural change towards system unification and simplification. A crucial point on the other hand is the willingness of the people to promote their careers permanently. This could be achieved by supplying as many people as possible with higher education, because well-educated people are more likely to study further.

Of course, several national peculiarities in the characteristics of the trends and drivers affecting the national E&T systems emerged during the panel sessions. In the following, some of these specific trends, which are strong in particular countries or regions and not so influential in others, are discussed.

A push towards regionalisation is a particularly big topic in Hungary and Spain; the latter is facing serious problems regarding migration. Participants of the Spanish seminar pointed out those social phenomena, not just economic ones are decisive for the further development of E&T. So they criticised the strong economic orientation of European E&T systems. The importance of the link between culture and education, school and society was also stressed in other seminars.

At the Finnish seminar, issues of security, safety and privacy were brought up deriving from uncertainty as a prevailing phenomenon in society. In light of risks arising from international terrorism and social exclusion the following questions were raised: Is teaching safe anymore? Are schools safe anymore? And – as an advanced e-Learning nation, a lot of teaching and learning is taking place over the Internet in Finland. Protection of privacy in these online learning systems was seen as an important issue that has not been adequately addressed.

The participating Eastern European countries (Hungary, Romania) are confronted especially with problems caused by fast changes due to transition and modernisation processes: polarisation of income, reduction in welfare provision, limited access to ICT infrastructure; in Hungary, learning has remained a strong functional activity in people's lives, since promises about long leisure times have not materialized yet. So there is no growing leisure time learning activity and joy of learning – which is very important for accomplishing the concept of LLL – as an emerging lifestyle is out of sight.

### **Policies shaping the future of European E&T**

One outcome of the national seminars was the general agreement that there is still margin to shape the future of European E&T. But there are many difficulties in introducing changes in the national educational systems in order to establish a European dimension in E&T. In many countries and regions, there is an inertia and slowness of national educational systems in assimilating innovation and change and there might be a significant loss in public authority and power to shape the future of E&T. It was noted at the Finnish validation seminar that market forces have an increasing impact on how the education and training system is evolving, while the role of the Ministry of Education in the process is diminishing.

The German Federal system impedes change and the establishment of even a national notion of education because the

Federal Ministry of Education and Research has only few possibilities of action since the policies applied depend on the regional governments. As a consequence, one certain policy can be present in one federated state while others follow different paths. One of the possibilities for exercising influence is by means of funds if a proposed policy has a financial background: the Federal Ministry offers funds and the federated states can apply for them.

For the interpretation of the European results of LEONIE the specific context of the participating countries was regarded as highly important because the interpretation has to bear reference to the 'big topics' prevailing in each country. But also the professional statuses of the LEONIE respondents as well as seminar attendees seem to be crucial. The tenor at the seminars was that these special national circumstances would lead to biased results, so it would not be possible to raise the LEONIE outcomes on an abstract European level.

Of course, this was the whole purpose of the national seminars and as it is shown above, this undertaking was successful in many respects. The feedback from the seminar attendees was extremely positive during and even after the seminars. According to the national Validation report of Romania, the LEONIE project even stimulated a permanent observatory regarding the trends and policies of the Romanian E&T system on the national level.

There was an explicit consent on the critical endeavour of the LEONIE project, which stimulated an urgently needed discussion process about crucial issues in education and training not just on a regional and national level but lifted it on a European level. After all, the meetings were welcomed occasions for the participants to meet and exchange ideas and views regarding the trends and policies determining national and European educational systems. Moreover, there was an agreement that the developments in other European countries could provide helpful suggestions for national reforms.

It is characteristic that in different European countries and regions different trends are taking place at different paces and at different institutional levels. European policies have to cope with all these regional peculiarities and differences in social and cultural perspectives, which are so important in the field of education. However, in a globalising and highly interdependent world no country is on its own so European nations have the underlying trends and development directions in common.

The future of E&T in times of fast and hectic changes is a delicate issue. Requisites are increasing according to evaluation, but it is even getting harder just to figure out what is really going on due to the complexity of E&T systems and their diverse interrelation to various economic, social and cultural phenomena. Moreover, the picture of the reality obtained by evaluation and analyses is always a mere part of reality and therefore quite vague. Despite all difficulties, LEONIE has achieved substantial steps in establishing an increased awareness for consolidating the European dimension in education and training.

Relying on the research carried out, the Leonie consortium has been able to spot those issues considered as fundamental by respondents in the form of core **tensions** for the future of learning systems. These tensions are:

1. Convergence vs. Context;
2. Continuity vs. Experimentalism;
3. Access vs. Excellence (Quantity vs. Quality);
4. Market Dynamics vs. Public Good Values;
5. Generalisation vs. Specialisation;
6. Information vs. Knowledge;
7. Individualisation vs. Socialisation of Learning;
8. Encouraging Traditional Providers vs. Bringing New Actors to drive Innovation in E&T;
9. More Investment vs. More Efficiency;
10. Focus on Young People vs. Re-directing Resources to Adult Learners.

The identification of tensions or 'critical uncertainties', might serve manifold purposes:

- Spur educational research, in line with the activity of broadly acknowledged international observatories of education such as OECD, which has also identified core dilemmas in its research activity on education;

- Reducing the complexity of multi-faceted evolutions while avoiding simplistic and unidirectional visions of the future;
- Providing a platform for debates among stakeholders which are often characterized by conflicting interests;
- Encouraging individuals and organizations to position themselves with regard to core issues for the future and develop a predictive capacity and a transformative approach; the following chapters of this report will elaborate more on this issue.

Furthermore, framing future development in the form of policy tensions has allowed the LEONIE consortium to structure along these lines a list of possible **indicators** to monitor change processes into education and training.

The LEONIE consortium has also identified several **levels of use** of its results and findings, in particular when it comes to the list of trends of change, policies and the tensions identified. The core tensions model can be used in order to:

### **Analyse one's own context and position**

The list of identified trends and policies could be developed into useful supporting tools for conferences and seminars on the future of education and training systems. Such tools provide a valuable framework for analysing the changes in a specific country or sector and for understanding the potential impact of various trends and policies in a particular context. This became evident in the course of the national workshops when opening a structured dialogue on the future of education and training systems.

### **Analyse and assess past and present policies according to the set of tensions identified**

Policy makers at European and national levels could assess policy aims/strategies against the tensions they identify. In this way policy makers could:

1. Achieve a better understanding of the trade-offs and the balances of forces that every political initiative directed towards E&T systems implies;
2. Develop general policy aims into specific objectives by responding to the following question: how could each term of the relevant tensions be dealt with in the framework of the policy aim proposed?
3. Since every tension is associated to indicators, policy makers could be in a position to assess the potential impact of their aims/strategy on fundamental dimensions such as the promotion of access/excellence, young/adult education etc.

### **Articulate the political debate**

As an example of possible use, the debate on policies for education and training can be structured around the tensions model.

### **Building scenarios**

Another example of the application of the tensions models is scenario building. A scenario matrix based on two of the identified tensions (access vs. excellence and convergence vs. context), has been elaborated. Prototype scenarios have been conceived in this way. These are called:

1. 'Mc-learn': the learning supermarket;
2. 'Civitas': learning citizenship;
3. 'Ask the Wizard': Professional learning communities;
4. 'Knowledge valley': Global networked centres of excellences.

Nevertheless, two limitations must be made explicit:

- The four resulting scenarios are obviously 'extreme' situations that would apply only when no counter trends to the generating ones would exist;
- Since the two poles of a tension are not necessarily opposite, the 'real scenarios' would rather need to be built upon original combinations of the poles of the tensions rather than combining two poles of different tensions.

### **Planning influence on the future**

It is a strong belief among the partners that education and training should play a pivotal role in shaping the future of Europe and

that the LEONIE results could offer a logical and methodological framework useful for those stakeholders who wish to take a proactive approach.

The reactions of most of the participants of the LEONIE final conference, national seminars and research activities, (more than 2000 people) have been extremely encouraging. This is why the LEONIE partnership, even beyond the end of the project in April 2005, intends to keep consulting policy makers, researchers, experts, but also practitioners and other stakeholders on the future of European education and training systems and publicize the results of this ongoing exercise.

Furthermore, LEONIE foresees the collaboration with existing observatories (UNESCO, OECD, eLIG, EUROSTAT, CEDEFOP, EUN, HELIOS...) and other institutions as another field of possible productive activity where the LEONIE methodology and results can contribute to a better understanding and evaluation of ongoing and future analysis of learning systems. The ongoing research activities and the synergies with existing observatories will also lead to the organisation of joint seminars and conferences on the future of education and training in Europe and worldwide.

Through the organisation of such events, the LEONIE consortium intends to promote informal discussion and networking arenas on the future of education and training in Europe and worldwide, thus establishing a basis for a **European wide dialogue** on the future of education and training out of the official 'representative tables'.

This is to be intended as an on-going process, which could be continued through the establishment, consolidation and animation of a **forum evolving towards a 'laboratory', or a community of practice** motivated to enhance and give to European lifelong learning its rightful place in the knowledge society and build consensus on proposals and initiatives aimed at achieving this goal.

Finally, an **action plan** on the future of LEONIE should include the following issues:

- Carrying on research and dialogue in order to deepen and widen observation activities on change into European learning systems;
- Multiplying the discussion arenas on education and training;
- Building on the LEONIE results so as to stimulate proactive and transformative approaches to change;
- Using the LEONIE results and thus achieving a critical mass of consensus so as to make it self-sustainable;
- Identify relevant implications for policy and practice.

The most important and general policy implication of the LEONIE research as regards the European education and training systems, the national dimension and the sectoral level bear on the implementation of a transformative strategy (see the previous chapter) oriented at **fostering innovation in education and training**. This can be accomplished by:

- Enhancing innovation in education and training and promoting innovative networking and partnership arrangements, allowing public institutions to envisage inter-departmental collaboration, support the setting up and running of innovative partnerships, facilitating their medium and long-term sustainability. Likewise, the policy should allow room for envisaging and developing ways of collaboration between teachers, domain experts, animators and other rapidly emerging teaching functions, both within and between institutions;
- Revising policy making at the level of national curricula and programmes, so as to enable the development of those areas of the curricula most amenable to innovation;
- Granting more autonomy to E&T institutions so that these will be able to modify their internal structures along the lines of learners, society and markets' needs;
- Furthermore, more attention should be devoted to the systemic resistance to innovation within education and training; policy actions should rely on successful experiences of innovation transfer and investigate their scalability at different organisational levels.

More specific recommendations for policy actions are listed below.

- **Promote research and dialogue on education and training at the international level** Longitudinal projects dealing with long-duration innovations in one or more institutions would provide insights with respect to sustainability and expansion of innovations into education and training. Also comparative transnational research should be fostered, attempting to analyse and compare E&T systems in a more 'holistic way' than looking only at students outcomes (as it is the case for the OECD-Pisa approach);
- **Cope adequately with policy tensions.** The LEONIE research activity has attempted to demonstrate how the educational and training sphere is currently subject to a series of tensions, although not necessarily opposite. Coping adequately with tensions can give rise to genuine innovation. Policy makers need to find the right blends of policies which foster one, the other or both extremes of the tensions so as to transform potential constraints into opportunities;
- **Re-define and re-align learning systems vis-à-vis the State, the civil society, the voluntary sector and the market.** Leonie has detected the ancillary role of the education and training spheres in relation to the economic sphere. But education is a problem of the entire society, and cannot be considered as a passive transmitter of market paradigms. Consequently, there is a need of making European learning systems the leading area of change and proactivity in the knowledge society. Investing more in developing change management process and learning organisation approaches into education and training can do this. Furthermore, institutional and professional autonomy coupled with social accountability (i.e. socio-political and economic accountability) seem to be amongst the most crucial points;
- **Avoid self-referentiality of Educational, training and informal learning systems.** This does not only mean that partnerships and inter-organisational cooperation should be established (as mentioned above) but also that exchanges of best practices should encompass cross-sectoral, cross-cultural and international learning experiences, management, quality and cost-effectiveness assurance models, research results and capitalisation of experiences;
- **Consolidate the European dimension of education.** A European framework of reference for the transparency of qualifications' is needed in this respect. Virtual and physical mobility is to be increased by active sponsorship and by removing obstacles;
- **Improve and diversify investment in social capital.** In the current economic and budgetary climate, the case for a 'substantial increase' in investment in human resources sought by the Lisbon European Council remains stronger than ever, particularly as it conditions future growth as well as social cohesion. Required funds should be raised efficiently with a well-balanced mix from public as well as private sources. Also, the education system has to become more efficient and of better quality. For this purpose, it is important to open up the institutions (self-government);
- **Let lifelong learning become reality for all citizens.** To achieve the goal of lifelong learning, comprehensive, coherent and well-coordinated strategies are needed. Appropriate measures have to aim at disadvantaged groups. Common European centres of reference and principles have to be applied. Individuals' personal development and fulfillment, their social and professional integration and any subsequent learning is largely dependent on the acquisition of a set of key competences by the end of obligatory schooling (foreign languages, mathematical literacy and basic competences in science and technology, ICT skills, learning-to-learn skills, interpersonal and civic competences, entrepreneurship and cultural awareness).







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